

REMARKS

The Office Action of November 15, 2006 has been received and its contents carefully considered. An RCE is being filed concurrently in order to permit further prosecution.

The present Amendment revises independent claim 1 by adding a limitation. The added limitation is that the inorganic powder content has a weight percentage that is larger than the weight percentage of the reinforcing fiber content. This limitation is supported (for example) by Table 2 in the application. In Examples 1 and 2 in Table 2, the weight percentage of inorganic powder (here, spherical silica powder) is larger than the weight percentage of reinforcing fiber (here, glass fiber). In Example 3, the inorganic powder content has a smaller weight percentage than the reinforcing fiber content, but Table 2 shows that the wear resistance for Examples 1 and 2 is substantially better than the wear resistance for Example 3.

The present Amendment also adds new dependent claims 8 and 9 to further protect the invention. Claim 8 is supported by Examples 1 and 2 in the application's Table 2, and claim 9 is supported by Example 1.

Section 2 of the Office Action rejects claims 1, 2, and 4-7 under the first paragraph of 35 USC 112, on the ground that "20 to 50 percent by weight of an inorganic powder..." constitutes new matter. The rejection is respectfully traversed.

The high end of this range is 50% by weight, which is supported (for example) by claim 1 of the application as-filed. The low end of the range is supported by Example 3 in application's Table 2. Values between the high and low ends of the range are supported by Examples 1 and 2 in Table 2. It is therefore respectfully submitted that an

ordinarily skilled person who had read the present application would have realized that the range for the inorganic powder content that is recited in claim 1 was within the cognitive possession of the inventors.

Section 3 of the Office Action rejects independent claim 1 (along with dependent claims 2 and 4-7) for obviousness based on a published US application by Asai et al (hereafter simply "Asai") in view of a patent by Isutsumi et al (hereafter simply "Isutsumi") and the The Handbook of Fillers. For the reasons discussed below, however, it is respectfully submitted the invention defined by claim 1 (the sole independent claim in this application) is patentable over these references.

The Office Action takes the position that the content of a phenolic composition that is disclosed in Asai permits calculation of weight percentages for Asai's inorganic fiber, silica, rubber, and phenol resin. What the Office Action neglects is that Asai includes additional components such as calcium hydroxide, magnesium oxide, and zink stearate or the like in the amount of 16 parts by weight to 100 parts by weight of phenol resin. It is respectfully submitted the calculations set forth in the Office Action are incorrect due to the neglect of this additional components.

The following Table A shows a corrected calculation of the weight percentages involved in the Asai reference.

Table A (for Asai)

Component	pts. by weight	% by weight
phenol resin	100	31.2—53.5
natural silica powder	30—90	11.5—36.4
inorganic fiber	40—100	15.3—40.5
rubber component	1-15	0.3-7.5
pigment, release agent, etc	16	5.0-8.6

A principal object to the present invention is to increase the amount of inorganic powder in a resin pulley in order to suppress wear caused by dust of the like. More specifically, it is possible to improve the wear resistance of a resin pulley by increasing the percentage by weight of inorganic powder (W_p) with respect to the percentage by weight of reinforcing fiber (W_f), so that $W_p > W_f$. This provides a surprising improvement in wear resistance, as can be verified by comparing the wear resistance of Examples 1 and 2 in Table 2 of the present application with the wear resistance of Example 3.

It is apparent from the Examples in Table 1 of the Asai reference that the content ratio (% by weight) of Asai's natural silica powder (inorganic powder) is smaller than the content ratio (% by weight) of Asai's glass fiber (reinforcing fiber). In the three Examples shown in Asai's Table 1, the content ratio of the natural silica powder is 65 parts by weight ($W_p = 24.3$ % by weight), and the content ratio of the glass fiber is 75 parts by weight ($W_f = 28$ % by weight) to 100 parts by weight of the phenol resin. The content ratio W_p of the natural silica powder and the content ratio W_f of the glass fiber in Asai's three examples thus have the relationship $W_p < W_f$, in contrast to what is now recited in claim 1.

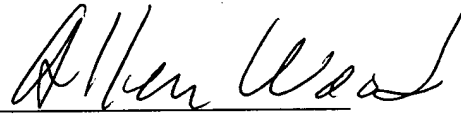
It is therefore respectfully submitted that the invention now defined by claim 1 is patentable over Asai and the other references. The remaining claims depend from claim 1 and recite additional limitations to further define the invention, so they are patentable over the references for this reason along. Nevertheless, new dependent claims 8 and 9 will now be briefly addressed.

New claim 8 provides that the content ratio W_p of the inorganic powder is not less than 33% by weight. In the Examples in Asai's Table 1, in contrast, W_p is 23.4%.

New claim 9 provides that the percentage by weight W_p of inorganic powder is greater than the percentage by weight W_r of phenol resin. In contrast, claim 1 of the Asai's patent limits the amount of natural silica powder to 30 to 90 parts by weight to 100 parts by weight of phenol resin.

For the foregoing reasons, it is respectfully submitted that this application is in condition for allowance. Reconsideration of the application is therefore respectfully requested.

Respectfully submitted,



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